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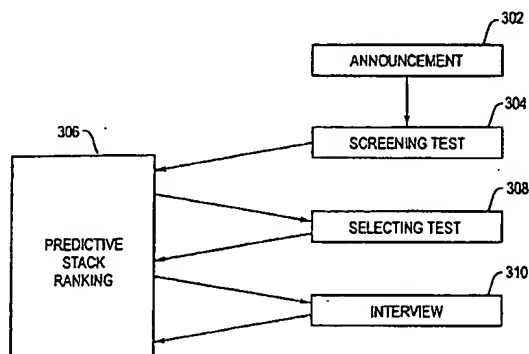
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(54) SYSTEME INFORMATIQUE POUR LA GESTION DES RESSOURCES HUMAINES
(54) COMPUTER-IMPLEMENTED SYSTEM FOR HUMAN RESOURCES MANAGEMENT

(57)
A system and method for testing and/or evaluating employees or potential employees is disclosed. A computer arranges a plurality of applicants in a stack ranked table (306). The table may rank or re-rank applicants against each other, from best to worst, after successive screening (304), selecting (308), and/or interviewing (310) stages for a particular job. Performance evaluation of hired workers may be fed back to the computer for adjusting the system and method. Competencies shown to be predictive of successful performance of a given type of job are tested for at various stages in an online testing system.
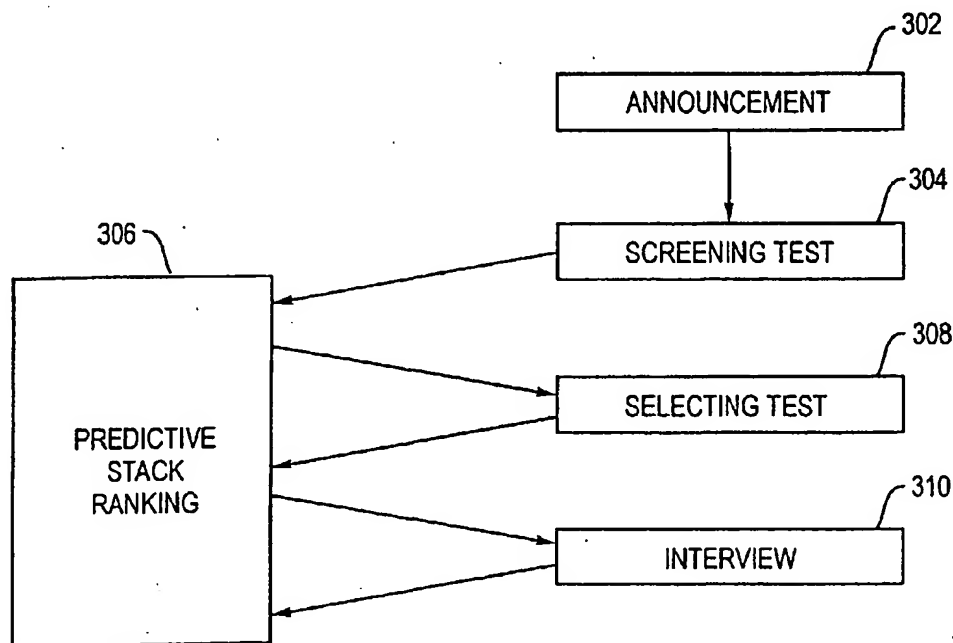
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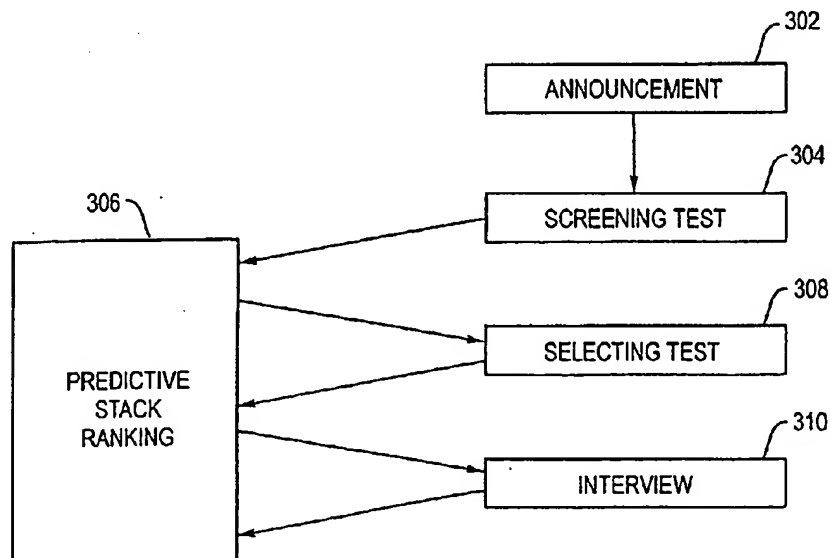
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COMPUTER-IMPLEMENTED SYSTEM FOR HUMAN RESOURCES MANAGEMENT

5   This application claims the benefit of United States Provisional Patent Application No. 60/211,044, filed June 12, 2000.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 provides a block diagram of an exemplary system in accordance with the present invention.

10   Figure 2 illustrates a process for testing and evaluating job applicants in accordance with an embodiment of the present invention.

Figure 3 depicts a hiring procedure in accordance with one embodiment of the invention.

Figure 4 is a block diagram of a process employing feedback.

15   Figure 5 diagrams an online system in accordance with one embodiment of the invention.

Figure 6 shows an example of a web-based presentation for a screening solution.

Figure 7 shows an example of a stack ranked table.

Figure 8 shows an example of a screening solution question presented to an

20   applicant taking a screening solution test over the Internet.

Figure 9 shows an example of a structured interview guide for use in an interview solution.

Figure 10 illustrates procedural steps that may be followed in a web-based applicant system according to an embodiment of the present invention.

25   Figure 11 illustrates procedural steps that may be followed in a web-based selection solution according to an embodiment of the present invention.

Figure 12 illustrates procedural steps that may be followed by an employer according to an embodiment of the present invention.

Figure 13 illustrates a human capital management life-cycle.

DETAILED DESCRIPTION

A system for testing a job applicant provides a computerized stack ranking of multiple applicants, predictive of the comparative levels of successful job performance. The predictive stack ranking may be used as a dynamic interactive filter with a pool of applicants over the course of the evaluation or employment process. The system may utilize a communications network to communicate between an applicant terminal and a system server.

The system may be used for example for screening, selecting, retaining, assigning, or analyzing the job applicant. The job applicant can for example be a new job applicant, an employee seeking to retain a job, an employee seeking a different job in the same organization, or an employee being evaluated for retention, re-assignment, or promotion. Applicants may or may not know they are being evaluated.

Once an applicant becomes an employee, the system may collect data regarding the employee for use in a feedback loop informing the online hiring process and improving the accuracy of the predictive stack ranking. For example, the data may indicate the employer's rating of the employee's actual job performance. Such a rating can be cross-checked against the answers that the employee gave during the application process. The cross-checking can be used as feedback to refine the questions and evaluation criteria used at each stage of the hiring process. For example, the cross-checking may be analyzed to select from among many questions a small subset having high predictive value. The small subset can then be used in a quick initial screening stage. Or, the small subset can be given greater weight than other questions in a computerized stack ranking of candidates.

Figure 1 provides a block diagram of an exemplary system in accordance with the present invention. A job applicant can use applicant terminal 102 to communicate over network 104 with system server 106. Applicant terminal 102 may for example be a telephone handset, a personal computer, a workstation, a handheld wireless device such as those marketed under the trademarks PALM or HANDSPRING, or a Wireless Application Protocol enabled device such as a mobile phone. Network 104 may for example be the Internet, the World Wide Web, a wide area network, a local area network, a telephone network, a wireless communication network, a combination thereof, or any other link capable of carrying communications between an applicant terminal and a server.

System server 106 employs a testing computer program 108 and has access to a scoring database 110. System server 106 communicates with applicant terminal 102 in accordance with instructions from testing computer program 108.

System server 106 may communicate with employer server 112 over network 104

5   or over direct link 114. System server 106 is shown as a unitary server, but may be a distributed computing platform.

An applicant terminal may be remote from, or co-located with, system server 106 and/or employer server 112. For example, applicant terminal 102 may be located at a job applicant's home, applicant terminal 116 may be located at a job fair or employment

10   office, and applicant terminal 120 may be located at an employer's location.

Partner server 121 may be linked to network 104 and system server 106 to facilitate integration of a business partner seeking to participate in the system of Figure 1.

System server 106 may pose questions to a job applicant located at an applicant terminal, receive responses from the job applicant, and score the answers in accordance

15   with scoring database 110. The scoring may take place in real time, i.e., while the applicant is still online, and may be reported in the form of a comparative stack ranking of multiple applicants. The stack ranking may be delivered from system server 106, over either network 104 or direct link 114, to employer server 112.

Scoring of each answer by system server 106 may be instant, i.e., before the next

20   question is answered. Thus, adaptive testing techniques may be implemented over network 104. For example, the answers given by an applicant at applicant terminal 102 to questions propounded early in a test may determine which questions are propounded by system server 106 to the applicant later in the same test. In addition, if an applicant at terminal 102 provides an unacceptable answer to a disqualifying "knock-out" question,

25   server 106 may immediately terminate the test.

These same adaptive testing principles may be applied to a software program used to support a real time interview, either in person or over a communications network. For example, an employer conducting an oral interview in person or over a telephone can enter a candidate's oral answer into employer terminal 124, which then communicates the

30   answer to system server 106, which in turn suggests via employer terminal 124 the next question for the employer to ask the interviewee.

The system may test an online applicant for any competency desired, in any sequence. The tested competencies may be abilities, traits, knowledge, skills, etc., that have been proven relevant to and predictive of successful job performance. By way of example and not limitation, the following competencies may be tested:

1.   dependability
2.   agreeableness
3.   critical thinking
4.   problem solving ability
5.   talkativeness
6.   assertiveness
7.   gregariousness
8.   persuasiveness
9.   achievement
10.   education
11.   experience
12.   customer service orientation
13.   customer focus
14.   conscientiousness
15.   self-confidence
16.   motivation
17.   revenue focus
18.   cognitive ability
19.   leadership
20.   decision making
21.   flexibility
22.   commitment
23.   learning ability
24.   dedication
25.   tenacity
26.   number of jobs held
27.   length of time in job(s)
28.   working with information

29.   supervisory potential

30.   judgment

31.   leadership

32.   coaching skills

33.   teamwork

34.   interpersonal skills

35.   business leadership

36.   leadership motivation

37.   self-leadership

38.   interpersonal leadership

39.   communication skills

40.   management potential

41.   likelihood of retention

42.   self-control

43.   energy

44.   executive potential

45.   listening orientation

46.   language skills (English, etc.)

47.   verbal reasoning

48.   spatial ability

49.   interest

50.   motivation

Typically, system server 106 tests for certain ones of the competencies that have been proven to be predictive of successful performance of the type of job for which the applicant is being considered. The results of the testing are tabulated in a stack ranked table. The stack ranked table may rank a number of applicants against each other and list them in order, from first to last. The table may also present other information for each applicant. The other information may include, by way of example and not limitation:

1.   Name

2.   Identifying number (e.g. social security number).

3.   Score achieved at various stages for various competencies.

4.   Recommendation (or not) to continue the hiring process beyond each stage

5. Link to application information (e.g. address, resume details)

6. Contact information (phone number, e-mail address, mailing address, etc.)

7. Date of application

8. Success or failure in complying with knockout requirements for the job

5   9. Screening solution scores, presented as percentiles.

10. A calculated recommendation to proceed or not to proceed with the applicant

11. Results (by competency) of the selection solution

12. Link to allow manual entry of the test answers if not done on computer directly by the applicant

10 13. A calculated recommendation to hire or not hire based on a weighted overall score of selection competencies (or other factors the hiring company wishes to use and that are approved as statistically valid and legally defensible)

14. Additional columns for storage of data from a structured behavioral interview

15. Additional columns for storage of data from other decision-making processes such

15   as drug testing, reference checks, or medical exams.

A process for testing and evaluating job applicants may be described with reference to Figure 2. Generally, applicant testing 201 includes providing a test to a job applicant and scoring the applicant's answers. The test may be administered online or it may be administered manually off-line. Scores are entered into a system for calculating a

20 stack ranked table. Predictive stack ranking 202 generally includes ranking a job applicant against other job applicants in order from first to last or other comparative ranking. The other job applicants may be current job applicants, past job applicants, or fictional job applicants.

Figure 3 depicts a hiring procedure in accordance with one embodiment of the

25 invention. Announcement 302 may be an online job announcement such as a web page with an "apply now" hyperlink icon. The web page may reside on an employer's website or an employment agency website, for example. Or, an online job announcement may be a recorded announcement on a menu-driven telephone voice processing system. Alternatively, announcement 302 may be an offline job announcement such as a

30 newspaper advertisement.

In response to announcement 302, an interested job applicant requests administration of screening test 304. Screening test 304 may be remotely administered

and scored online, with the scores being automatically provided to predictive stack ranking 306. Alternatively, screening test 304 may be administered manually with paper and pencil, and then graded by hand or machine, with the scores being provided to predictive stack ranking 306. The predictive stack ranking may for example be constructed by system server 106 or employer server 112.

Predictive stack ranking 306 totals the graded answers according to particular competencies known to be relevant to successful job performance. Predictive stack ranking 306 may be administered by a computer processor located at system server 106, for example. Predictive stack ranking 306 may give different weight to different questions, and may at any stage immediately disqualify an applicant providing an unacceptable answer to a "knock-out" question. Predictive stack ranking 306 may rank the applicant in order against other job applicants in a table. Predictive stack ranking 306 may be used to decide which applicants to invite for the next stage, selection test 308.

Selection test 308 is preferably conducted under supervised conditions. For example, selection test 308 may be administered in person. An in-person test may take place at a job fair, an employer's location, a job site, or an employment agency. An in-person test may include verification of the job applicant's identity, such as by examination of a photo identification document produced by a test-taker. Selection test 308 may be administered online or manually. Supervised conditions typically include observation of the test-taker during administration of the test. The answers to selection test 308 are graded and the results are incorporated in predictive stack ranking 306.

Predictive stack ranking 306 may then update a previously created entry for the applicant and rank or re-rank the applicant in order against other job applicants. After this is accomplished, the highest ranking applicants may be invited for interview 310.

Interview 310 may be structured or unstructured, online or in person. If interview 310 is structured, a program leads the interviewer through the interview by suggesting questions one at a time. The program may be a list of questions written on paper or it may be a computer program resident for example in system server 106. The program suggests questions that are predetermined to be valid, i.e., proven to be associated with successful job performance and legally permitted. The interviewer can input the answers and/or a score for the answers, either after each answer or at the conclusion of the interview. This can be done via employer terminal 124, for example.

Interview 310 results in an interview score being provided to predictive stack ranking 306. Predictive stack ranking 306 is revised to reflect the interview score. In particular, the relative rank of the job applicants is reassessed.

Figure 4 is a block diagram of a process employing feedback. Test design 402 is

5   initially performed using industry-accepted standards. Test administration 404 tests and scores job applicants and/or incumbents. Employee performance evaluation 406 measures actual job performance of the applicant or incumbent after holding the job for a period of time. This information is fed back to test design 402 and/or test administration 404. Test design 402 may be revised to delete questions which were not predictive of successful job

10 performance. This can be done for example by deleting questions whose answers bore no relation to performance evaluation 406 for a statistically valid sample. Test administration 404 may be revised by adjusting the weight given to certain questions or answers that showed an especially strong correlation to employee performance evaluation 406. For example, if test administration 404 is associated with predictive stack ranking 306,

15 feedback from employee performance evaluation 406 may help determine how various job applicants are comparatively ranked against each other.

Figure 5 diagrams an online computer based system 500 in accordance with one embodiment of the invention. Box 502 represents a job vacancy with a requirement for an online screening and selection solution. The vacancy can come to the attention of a

20 potential job applicant in a number of ways.

For example, box 504 represents an online application via a hiring company's own website. A company offering a job may post a vacancy announcement on the company's website and invite job seekers to apply by clicking on an icon labeled "apply here" or the like. Box 506 represents a similar posting on an online job board. Box 508 represents

25 candidates given a Uniform Resource Locator (URL) directly by the company. This may occur when the company offering a job identifies a potential candidate. Box 510 represents a media advertisement including a URL for a job. Thus, job seekers observing the advertisement can direct their browsers to the indicated URL.

At job fair 512, job seekers may be provided a URL associated with the company

30 or the particular vacancy. Paper-and-pencil measures could also be used at job fairs and entered into the system. A computer terminal may be provided for use of job seekers at job fair 512, enabling job seekers to participate in the online system. Box 514 represents

an executive search via a recruiter network. Job seekers relevant to the search are identified in recruitment firm applicant database 516. Database 516 can link to a URL associated with the job.

Preferably, no matter how a potential applicant becomes aware of or identified for
5   a job opening in system 500, the potential applicant is considered at decision 520.
Decision 520 asks whether applicant has completed the required screening solution 524.
If not, the applicant at box 522 is given via e-mail, mail, or in person, a URL for
assessment. For example, system 500 may send an e-mail message to a potential
applicant, the e-mail message inviting the potential applicant to apply for vacancy 502 by
10   directing a browser to a screening solution URL provided in the e-mail message.
Alternatively, when a potential applicant is visiting a website at which decision 520
determines that the required screening solution has not been completed, the website host
can provide a link to a web page identified by the screening solution URL. Decision 520
may be based on a potential applicant's name, e-mail address, and/or other identifying
15   information.

Screening solution 524 is administered via the Internet and is hosted at the
screening solution URL mentioned above. Screening solution 524 asks screening
questions to ascertain if the applicant has the basic qualifications to do the job. These are
based on questions typically asked by recruiters but which are statistically validated over
20   time to ensure they are legally defensible and predictive. The questions may include a
combination of biodata and personality measures. They may include self-assessments of
skill levels appropriate to the job requirements. Screening solution 524 requires applicants
to transmit elicited information over the Internet. A possible example of a web-based
presentation for screening solution 524 is illustrated in Figure 6. Screen shot 600 shows a
25   portion of the presentation.

Once completed, screening solution 524 provides applicant feedback 540 and
conveys applicant details and screening scores to stack ranked table of applicants 530.
Applicant feedback 540 may provide a message to the online applicant indicating that the
screening solution is complete, that the applicant has passed or failed the screening stage,
30   and that the applicant may or may not be contacted in due course. Other information may
also be provided to the applicant in the feedback pages, like a realistic job preview,
recruiter phone number, scheduling information, etc.

Once an applicant has completed the screening solution, system 500 ranks the applicant in comparative order against other applicants in stack ranked table of applicants 530. A certain number or percentage of applicants in table 530 will be chosen for further consideration. For example, the applicants ranking among the top five of all applicants

5   ranked in table 530 may be chosen for advancement in the system at this juncture. Information identifying the chosen applicants will be included on a "short list" as indicated by box 536.

The short list chosen at box 536 is transmitted to selection solution 538, at which the advancing applicants are invited to answer selection questions. Selection solution 538

10   asks additional questions and requires an advancing applicant to input answers. Preferably, the applicant completes selection solution 538 while sitting at a terminal located at one of the company's locations. The terminal communicates over the Internet with a website set up to administer the selection solution.

At the conclusion of selection solution 538, applicant feedback 540 is provided

15   from the website to the applicant, and applicant details and scores 541 are incorporated in stack ranked table 530. Feedback 540 may optionally include a sophisticated report on the applicant's strengths and weakness. The applicant may then be directed to an appropriate web page chosen by the hiring company. One page may indicated successful completion and a second page may indicate failure. The appropriate web page may suggest other

20   openings appropriate to the applicant's test responses and may provide hyperlinks the applicant can use to initiate the application process for these other openings.

Once stack ranked table 530 re-ranks the applicants as a result of selection solution 538, some applicants are invited to participate in interview solution 542. For example, the top three applicants as ranked by table 530 after selection solution 538 may be invited for

25   an in-person interview. Because the selection solution is preferably in instant communication with stack ranked table 530, the interview invitation may be extended immediately at the conclusion of the selection solution.

Interview solution 542 is preferably a structured interview, with questions provided via the Internet to the interviewer at the company's location. The interviewer reads the

30   provided questions and reports a score over the Internet from the company's location for incorporation in stack ranked table 530. Benchmark performance anchors may assist the interviewer in grading the applicant's responses.

Interview solution 542 can be designed according two exemplary models. In a first model, an employer is provided with standard interview guides for several job types as well as the competency templates for these types so that the employer can build variations to meet specific needs. In a second model, an employer can build new interview guides and new competency templates. In the second model, the employer has access to the full array of work-related competencies and associated questions in a comprehensive question bank.

In ranking applicants, stack ranked table 530 may consider a combination of different biographical, personality, behavioral, and other appropriate information and competencies. In addition to the comparative ranking, table 530 may indicate for each applicant a yes/no recommendation, a percentage likelihood of successful job performance, biographical information not used for evaluative purposes, and so forth.

Stack ranked table 530 may be developed by grading the various solution stages with a computer implementing the following algorithm. First, search for disqualifying answers to "knock-out" questions. Second, give points for answers matching those of the previously hired candidates who achieved a successful performance evaluation. Third, deduct points for answers matching those of the previously hired candidates who received an unsuccessful performance rating. Fourth, multiply the added or subtracted points by any weighting assigned each question. Fifth, sum the points for all questions related to a given competency. Sixth, compare the summed points for each competency to norms of either the job-holders in the company or a wider population. Seventh, predict performance of the applicant as a worker in the job, based on the business outcomes identified by the hiring company and the competencies that contribute to those outcomes.

A final selection is made based on stack ranked table 530. Preferably, the selection is transmitted over the Internet to the company, enabling the company to make an offer to the selected applicant(s). For example, if there is only one opening, an offer may be extended to the applicant ranked highest by stack ranked table 530. If the applicant accepts the offer, the applicant is employed by the company. If the applicant declines, the next highest ranked applicant in stack ranked table 530 is offered the job. If a plural number of openings exist, that number of applicants may be selected off the top of stack ranked table 530 and offered the job. If one of the applicants declines, the next highest

ranked applicant in stack ranked table 530 is offered the job. Data from stack ranked table 530 is forwarded to data warehouse 534.

The performance of successful applicants is monitored during their employment. At box 550, performance data for successful applicants are collected at a later date, and sent to data warehouse 534.

Data collected at data warehouse 534 are used for research and development and for reporting purposes. For example, functions enabled by storing comprehensive data generated by system 500 may include:

    a. Storage of question level responses from applicants for jobs. This can be used for re-checking of applicant information (auditing etc.) and for research to develop new solutions and questions.

    b. Reporting on Equal Employment Opportunity Commission requirements. Data on ethnicity etc. can be stored to enable an employer to comply with reporting requirements to government agencies.

    c. Source of data for designing new solutions including data on the nature of the job and the competencies that are required by the role (job analysis). This data is collected using online assessments.

    d. Source of data for statistical research on correlation between the solutions and their predicted outcomes for applicants, and the actual outcomes for employees who were hired (validation studies).

    e. Design of solutions other than recruitment related solutions.

    f. Reporting of usage volumes for billing and financing accounting purposes.

Because system 500 preferably uses instant communications, adaptive testing techniques may be implemented online. An applicant's failure to overcome hurdles in a given solution will deliver a different path through the solution than that of a successful applicant. The degree of advancement of a given applicant through system 500 may result in different charges to the company from a solutions provider. For example, a solutions provider that hosts a website supporting screening solution 524, selection solution 538, and interview solution 542 may charge the hiring company the following amounts: one dollar for every applicant completing only the screening solution, five dollars for every applicant advancing only to the end of the selection solution, ten dollars for every

applicant rejected after the interview solution, twenty dollars for every applicant offered a job, and fifty dollars for every applicant accepting an offer.

In practice, any of the various stages (screening solution 524, selection solution 538, and interview solution 542) may be skipped, re-ordered, combined with other stages, or eliminated. Or, a short telephone interview may be structured early in the process to quickly screen applicants.

In a preferred embodiment, the questions to be asked at the various stages are selected for a particular type of job being offered in accordance with a proven relationship with desired business outcomes. Business outcomes can for example include: level of sales, customer satisfaction, quality measures such as fault rates, retention and tenure of employment, time keeping, learning ability, progression to more senior roles over time, and supervisor ratings of behavioral success. The particular type of job is defined in conjunction with the U.S. Department of Labor "O*NET" classification system. Some types of jobs might include customer service, technical, professional, or managerial. Various competencies are determined to be associated with desired business outcomes for a given type of job. These competencies are tested for at various solution stages with appropriate questions.

The appropriate competencies, questions, scoring, weighting, and ranking factors for a new job can be designed from historical tests for existing jobs, by applying statistical techniques and using the gathering of data on the Internet to ensure rapid validation of the new assessment solution. Confirmatory job analysis is used to determine the appropriateness of solutions for a particular job.

Figure 7 shows an example of a stack ranked table. Computer screen shot 700 illustrates a sample stack ranked table 730 for a customer service job. Various tabs permit viewing of data generated by each solution stage. Tab 702 reveals data 703 from a screening solution, tab 704 reveals data 705 from a selection solution, tab 706 reveals data 707 from an interview solution, and tab 708 reveals all results. In screen shot 700, tab 708 is selected.

Section 709 of screen shot 700 shows general information about each applicant, including current rank 710, a link 712 to application information (not shown), last name 714, first name 716, and application date 718.

Screening solution data 703 includes an indication 720 of whether each applicant successfully passed the knockout requirements for the job. Data 703 also includes scores on certain competencies such as educational and work related experience 722, customer service orientation 724, and self-confidence 726. Column 728 indicates whether each applicant is recommended to advance beyond the screening stage.

Selection solution data 705 includes scores on certain competencies such as customer focus 732, conscientiousness 734, and problem solving 736. Column 738 indicates whether each applicant is recommended to advance beyond the selection stage.

Additional information (not shown) may include columns for storage of data from other decision-making processes such as drug testing, reference checks, or medical exams.

Figure 8 shows an example of a screening solution question presented to an applicant taking a screening solution test over the Internet. In screen shot 800, simulated customer contact record 802 is presented to the applicant. The applicant is asked question 804, and is required to click on a circle next to one of the answers. Question 804 may test for a competency in working with information, for example.

Figure 9 shows an example of a structured interview guide for use in an interview solution. As illustrated, the interview guide is being presented online on a computer screen to an interviewer conducting an interview with an applicant. Screen shot 900 shows interview item 902 for a sample customer service job. The customer service job opening is for a call center position, and revenue focus has been identified as a relevant and predictive competency. Item 902 elicits from the applicant a situation 904, the applicant's behavior 906 in the situation, and the outcome 908 reported by the applicant. The interviewer can grade the applicant's responses to item 902 by marking a score 910 from 1 to 10.

Figure 10 illustrates procedural steps that may be followed in a web-based applicant system according to an embodiment of the present invention.

Figure 11 illustrates procedural steps that may be followed in a web-based selection solution according to an embodiment of the present invention. For example, these steps may follow those illustrated in Figure 10.

Figure 12 illustrates procedural steps that may be followed by an employer according to an embodiment of the present invention.

The following tables provide examples of screening solutions and selection solutions designed for different types of jobs. The tables show components (competencies) shown to be relevant to successful performance of each job type. In the tables, some components are considered required, and others are considered optional.

Table One may be used for entry level and general skill jobs:

Table One: Entry/General Skilled Solutions			
	Solution Component	**Definition**	**Items**
Screening	**7 - 10 Minutes**		
Required	Educational and Work-Related Experience	Measures potential for success in entry-level jobs across industry type and functional area. Scores on Education and Work-Related Experience are derived from candidates' responses to questions regarding developmental influences, self-esteem, work history and work-related values and attitudes.	15
	Self-Confidence	This component references: belief in one's own abilities and skills and a tendency to feel competent in several areas.	7
Optional	Decision Making/ Flexibility	Measures potential for success in entry level positions. Scores on Decision Making and Flexibility are derived from candidates' responses to questions regarding developmental influences, self-esteem, work history and work-related values and attitudes.	8

Table One: Entry/General Skilled Solutions			
	Solution Component	Definition	Items
Selection	23 - 35 Minutes		
Required	Conscientiousness	This component is designed to predict the likelihood that candidates will follow company policies exactly, work in an organized manner, return from meals and breaks in the allotted time, and keep working, even when coworkers are not working.	65
	Retention Predictor	Measures commitment, impulsiveness, responsibility, and motivation. It predicts the likelihood that a new hire will remain on the job for at least three months.	44
Optional	Learning Ability	This component measures the tendency to efficiently and effectively use numerical and analytical reasoning. This competency is characterized by the ability to learn work-related tasks, processes, and policies.	54 (12 minute timer)

Table Two may be used for customer service jobs:

Table Two—Customer Service Solution			
	Solution Component	Definition	Items
Screening	**8 - 10 Minutes**		
Required	Educational and Work-Related Experience	Measures potential for success in customer service jobs. Scores on Education and Work-Related Experience are derived from candidates responses to questions regarding developmental influences, self-esteem, work history and work-related values and attitudes.	15
	Customer Service Orientation	Designed to predict the likelihood that candidates will show persistent enthusiasm in customer interaction, apologize sincerely for inconveniences to customers, be patient with customers, tolerate rude customers calmly, and search for information or products for customers.	20
Optional	Self-Confidence	This component references: belief in one's own abilities and skills and a tendency to feel competent in several areas.	7

Table Two—Customer Service Solution			
	. Solution Component	**Definition**	**Items**
Selection	**17 - 29 - 37 Minutes**		
Required	Customer Focus	Designed to predict the likelihood that candidates will show persistent enthusiasm in customer interaction, apologize sincerely for inconveniences to customers, be patient with customers, tolerate rude customers calmly, and search for information or products for customers.	32
	Conscientiousness	This component is designed to predict the likelihood that candidates will follow company policies exactly, work in an organized manner, return from meals and breaks in the allotted time, and keep working, even when coworkers are not working.	65
Optional	Learning Ability	This component measures the tendency to efficiently and effectively use numerical and analytical reasoning. This competency is characterized by the ability to learn work-related tasks, processes, and policies.	54 (12 minute timer)
Optional	Retention Predictor	Measures commitment, impulsiveness, responsibility, and motivation. It predicts the likelihood that a new hire will remain on the job for at least three months.	44

Table Three may be used for customer service jobs involving sales:

Table Three—Customer Service Solution: Sales Positions			
	Solution Component	**Definition**	**Items**
Screening	**9 - 15 Minutes**		
Required	Educational and Work-Related Experience	Measures potential for success in customer service jobs. Scores on Education and Work-Related Experience are derived from candidates responses to questions regarding developmental influences, self-esteem, work history and work-related values and attitudes.	15
	Customer Service Orientation	This component is designed to predict the likelihood that candidates will show persistent enthusiasm in customer interaction, apologize sincerely for inconveniences to customers, be patient with customers, tolerate rude customers calmly, and search for information or products for customers.	20
Optional	Sales Potential	Designed to predict the likelihood that candidates will suggest or show alternative solutions based on customer needs, direct conversation toward a commitment/ order/ sale, show confidence even after a hard refusal/rejection, and strive to close a transaction every time.	23

Table Three--Customer Service Solution: Sales Positions			
	Solution Component	Definition	Items
Selection	15 - 27 Minutes		
Required	Sales Potential	Designed to predict the likelihood that candidates will suggest or show alternative solutions based on customer needs, direct conversation toward a commitment/ order/ sale, show confidence even after a hard refusal/rejection, and strive to close a transaction every time.	60
	Customer Focus	Designed to predict the likelihood that candidates will show persistent enthusiasm in customer interaction, apologize sincerely for inconveniences to customers, be patient with customers, tolerate rude customers calmly, and search for information or products for customers.	32
Optional	Learning Ability	This component measures the tendency to efficiently and effectively use numerical and analytical reasoning. This competency is characterized by the ability to learn work-related tasks, processes, and policies.	54 (12 minute timer)

Table Four may be used for customer service jobs in a call center:

Table Four--Customer Service Solution: Call Center Positions			
	Solution Component	**Definition**	**Items**
Screening	**9 - 11 minutes**		
Required	Educational and Work-Related Experience	Measures potential for success in customer service jobs. Scores on Education and Work-Related Experience are derived from candidates responses to questions regarding developmental influences, self-esteem, work history and work-related values and attitudes.	15
	Customer Service Orientation	Designed to predict the likelihood that candidates will show persistent enthusiasm in customer interaction, apologize sincerely for inconveniences to customers, be patient with customers, tolerate rude customers calmly, and search for information or products for customers.	20
Optional	Self-Confidence	This component references: belief in one's own abilities and skills and a tendency to feel competent in several areas.	7

Table Four--Customer Service Solution: Call Center Positions			
	Solution Component	Definition	Items
Selection	**16 - 31 – 39 Minutes**		
Required	Customer Focus	This component is designed to predict the likelihood that candidates will show persistent enthusiasm in customer interaction, apologize sincerely for inconveniences to customers, be patient with customers, tolerate rude customers calmly, and search for information or products for customers.	32
	Conscientiousness	This component is designed to predict the likelihood that candidates will follow company policies exactly, work in an organized manner, return from meals and breaks in the allotted time, and keep working, even when coworkers are not working.	65
	Working with Information	This component is designed to predict success in customer service call-center jobs by assessing a candidate's ability to retrieve information and use it in order to solve problems.	30 (15 minute timer)
Optional	Retention Predictor	Measures commitment, impulsiveness, responsibility, and motivation. It predicts the likelihood that a new hire will remain on the job for at least three months.	44

Table Five may be used for customer service jobs in a call center involving sales:

Table Five—Customer Service Solution: Call Center Sales Positions			
	Solution Component	Definition	Items
Screening 9 - 15 Minutes			
Required	Educational and Work-Related Experience	Measures potential for success in customer service jobs. Scores on Education and Work-Related Experience are derived from candidates' responses to questions regarding developmental influences, self-esteem, work history and work-related values and attitudes.	15
	Customer Service Orientation	Designed to predict the likelihood that candidates will show persistent enthusiasm in customer interaction, apologize sincerely for inconveniences to customers, be patient with customers, tolerate rude customers calmly, and search for information or products for customers.	20
Optional	Sales Potential	Designed to predict the likelihood that candidates will suggest or show alternative solutions based on customer needs, direct conversation toward a commitment/ order/ sale, show confidence even after a hard refusal/rejection, and strive to close a transaction every time.	23

Table Five--Customer Service Solution: Call Center Sales Positions			
	Solution Component	Definition	Items
Selection	30 Minutes		
Required	Sales Focus	Designed to predict the likelihood that candidates will suggest or show alternative solutions based on customer needs, direct conversation toward a commitment/ order/ sale, show confidence even after a hard refusal/rejection, and strive to close a transaction every time.	60
	Customer Focus	Designed to predict the likelihood that candidates will show persistent enthusiasm in customer interaction, apologize sincerely for inconveniences to customers, be patient with customers, tolerate rude customers calmly, and search for information or products for customers.	32
	Working with Information	This component is designed to predict success in customer service call-center jobs by assessing a candidate's ability to retrieve information and use it in order to solve problems.	30 (15 minute timer)

Table Six may be used for jobs in sales:

Table Six--Sales Solutions			
	Solution Component	**Definition**	**Items**
Screening	**10 - 14 minutes**		
Required	Educational and Work-Related Experience	Measures potential for success in customer service jobs. Scores on Education and Work-Related Experience are derived from candidates responses to questions regarding developmental influences, self-esteem, work history and work-related values and attitudes.	15
	Sales Potential	Designed to predict the likelihood that candidates will suggest or show alternative solutions based on customer needs, direct conversation toward a commitment/ order/ sale, show confidence even after a hard refusal/rejection, and strive to close a transaction every time.	23

Table Six--Sales Solutions			
	Solution Component	Definition	Items
Optional	Customer Service Orientation	Designed to predict the likelihood that candidates will show persistent enthusiasm in customer interaction, apologize sincerely for inconveniences to customers, be patient with customers, tolerate rude customers calmly, and search for information or products for customers.	20
Selection	**10 - 25 - 40 Minutes**		
Required	Sales Focus	Designed to predict the likelihood that candidates will suggest or show alternative solutions based on customer needs, direct conversation toward a commitment/ order/ sale, show confidence even after a hard refusal/rejection, and strive to close a transaction every time.	60
Optional	Problem Solving	Measures the tendency to efficiently and effectively use numerical and analytical reasoning. This competency is characterized by the ability to solve complex problems, and make reasoned decisions.	10

Table Six--Sales Solutions			
	Solution Component	Definition	Items
Optional	Communication	Measures the tendency to efficiently and effectively use verbal reasoning. This competency is characterized by the ability to verbally explain complex information to others.	10

Table Seven may be used for supervisory jobs:

Table Seven--Supervisory Solutions			
	Solution Component	**Definition**	**Items**
Screening	**10 - 20 Minutes**		
Required	Supervisory Potential	Measures potential for supervisory success across industry type and functional area. Scores on Supervisory Potential are derived from candidates' responses to questions regarding academic and social background, and aspirations concerning work.	10
	Judgment	Measures potential for making good judgments about how to effectively respond to work situations. Scores on Judgment are derived from candidates' responses to questions regarding situations one would likely encounter as a manager/ supervisor.	10
Optional	Leadership/ Coaching Teamwork/ Interpersonal Skills	Measures potential for success as a supervisor. This is done by having applicants' make judgments about the most effective teamwork and leadership behaviors in specific work situations. Scores are determined by comparing their response profiles to the profiles of supervisors who are known to be successful.	19

Table Seven--Supervisory Solutions			
	Solution Component	Definition	Items
Selection	22 - 37 - 52 Mins		
Required	Business Leadership	Measures the candidate's thinking styles. High scorers are likely to have or learn good planning and organizing skills, be innovative, consider issues from multiple perspectives, and create strategies to build their business.	28
Required	Leadership Motivation	Measures the candidate's desire for achievement, drive, initiative, energy level, willingness to take charge, and persistence. High scorers are likely to be highly motivated to succeed and to set challenging goals for themselves and others.	23
	Self-Leadership	Measures the candidate's ability to control emotions, act with integrity, take responsibility for actions, and tolerate stress. High scorers are also likely to have a positive attitude, be optimistic about the future, and demonstrate high levels of professionalism.	32

Table Seven--Supervisory Solutions			
	Solution Component	Definition	Items
Selection	22 - 37 - 52 Mins (cont.)		
	Interpersonal Leadership	Measures the candidate's interpersonal characteristics. High scorers are likely to persuade and influence others, gain commitment, and build effective interpersonal relationships. They also have potential to develop skills in the areas of employee relations, coaching, motivating, and leading a team.	30
Optional	Decision Making/Problem Solving	Measures the tendency to efficiently and effectively use numerical and analytical reasoning. This competency is characterized by the ability to solve complex problems, and make reasoned decisions.	10
Optional	Communication	Measures the tendency to efficiently and effectively use verbal reasoning. This competency is characterized by the ability to verbally explain complex information to others.	10

Table Eight may be used for professional jobs:

	Solution Component	Definition	Items
Table Eight--Professional Solutions			
Screening	7 - Minutes		
Required	Dependability	This competency is characterized by: a willingness to behave in expected and agree upon ways; following through on assignments and commitments; keep promises; and accept the consequences of one's own actions.	40
	Interpersonal Skills	This competency is indexed by a tendency to be pleasant, cooperative, and helpful when working with others, as well as flexible in conflict resolution situations.	
	Self-Control	This competency is characterized by the ability to: stay calm and collected when confronted with adversity, frustration, or other difficult situations; and avoid defensive reactions or hurt feelings as a result of others' comments.	
	Energy	This competency is characterized by a preference to stay busy, active, and avoid inactive events or situations.	

Table Eight--Professional Solutions			
	Solution Component	Definition	Items
Selection	**35 - 50 Minutes**		
Required	Business Leadership	Measures the candidate's thinking styles. High scorers are likely to have or learn good planning and organizing skills, be innovative, consider issues from multiple perspectives, and create strategies to build their business.	32
	Leadership Motivation	Measures the candidate's desire for achievement, drive, initiative, energy level, willingness to take charge, and persistence. High scorers are likely to be highly motivated to succeed and to set challenging goals for themselves and others.	35
	Self-Leadership	Measures the candidate's ability to control emotions, act with integrity, take responsibility for actions, and tolerate stress. High scorers are also likely to have a positive attitude, be optimistic about the future, and demonstrate high levels of professionalism.	34

	Solution Component	Definition	Items
Table Eight--Professional Solutions			
Selection	35 - 50 Minutes (cont.)		
	Interpersonal Leadership	Measures the candidate's interpersonal characteristics. High scorers are likely to persuade and influence others, gain commitment, and build effective interpersonal relationships. They also have potential to develop skills in the areas of employee relations, coaching, motivating, and leading a team.	41
	Decision Making/Problem Solving	Measures the tendency to efficiently and effectively use numerical and analytical reasoning. This competency is characterized by the ability to solve complex problems, and make reasoned decisions.	10
Optional	Communication	Measures the tendency to efficiently and effectively use verbal reasoning. This competency is characterized by the ability to verbally explain complex information to others.	10

Table Nine may be used for managerial jobs:

Table Nine--Managerial Solutions			
	Solution Component	Definition	Items
Screening	**10 - 20 Minutes**		
Required	Management Potential	Measures potential for managerial success across industry type and functional area. Scores on Management Potential are derived from candidates' responses to questions regarding academic and social background, and aspirations concerning work.	10
	Judgment	Measures potential for making good judgments about how to effectively respond to work situations. Scores on Judgment are derived from candidates' responses to questions regarding situations one would likely encounter as a manager/supervisor.	10
Optional	Self-Confidence	This component references: belief in one's own abilities and skills and a tendency to feel competent in several areas.	10
	Decision Making	Measures potential for success as a manager. This is done by having applicants' make judgments about the most effective decisions in specific work situations. Their potential is determined by comparing their response profiles to the profiles of successful managers.	

Table Nine--Managerial Solutions			
	Solution Component	**Definition**	**Items**
Selection	**20 - 35 - 50 Mins**		
Required	Business Leadership	Measures the candidate's thinking styles. High scorers are likely to have or learn good planning and organizing skills, be innovative, consider issues from multiple perspectives, and create strategies to build their business.	32
	Leadership Motivation	Measures the candidate's desire for achievement, drive, initiative, energy level, willingness to take charge, and persistence. High scorers are likely to be highly motivated to succeed and to set challenging goals for themselves and others.	35
	Self-Leadership	Measures the candidate's ability to control emotions, act with integrity, take responsibility for actions, and tolerate stress. High scorers are also likely to have a positive attitude, be optimistic about the future, and demonstrate high levels of professionalism.	34

Table Nine—Managerial Solutions			
	Solution Component	**Definition**	**Items**
Selection	**20 - 35 - 50 Mins (cont.)**		
	Interpersonal Leadership	Measures the candidate's interpersonal characteristics. High scorers are likely to persuade and influence others, gain commitment, and build effective interpersonal relationships. They also have potential to develop skills in the areas of employee relations, coaching, motivating, and leading a team.	41
Optional	Decision Making/Problem Solving	Measures the tendency to efficiently and effectively use numerical and analytical reasoning. This competency is characterized by the ability to solve complex problems, and make reasoned decisions.	10
Optional	Communication	Measures the tendency to efficiently and effectively use verbal reasoning. This competency is characterized by the ability to verbally explain complex information to others.	10

Table Ten may be used for technical/professional jobs:

Table Ten--Technical-Professional Solutions			
	Solution Component	**Definition**	**Items**
Screening	**8 Minutes**		
Required	Dependability	This competency is characterized by: a willingness to behave in expected and agree upon ways; following through on assignments and commitments; keeping promises; and accepting the consequences of one's own actions.	40
	Interpersonal Skills	This competency is indexed by a tendency to be pleasant, cooperative, and helpful when working with others, as well as flexible in conflict resolution situations.	
	Self-Control	This competency is characterized by the ability to: stay calm and collected when confronted with adversity, frustration, or other difficult situations; and avoid defensive reactions or hurt feelings as a result of others' comments.	
	Energy	This competency is characterized by a preference to stay busy, active, and avoid inactive events or situations.	

Table Ten--Technical-Professional Solutions			
	Solution Component	Definition	Items
Selection	35 - 50 Minutes		
Required	Business Leadership	Measures the candidate's thinking styles. High scorers are likely to have or learn good planning and organizing skills, be innovative, consider issues from multiple perspectives, and create strategies to build their business.	32
	Leadership Motivation	Measures the candidate's desire for achievement, drive, initiative, energy level, willingness to take charge, and persistence. High scorers are likely to be highly motivated to succeed and to set challenging goals for themselves and others.	35
	Self-Leadership	Measures the candidate's ability to control emotions, act with integrity, take responsibility for actions, and tolerate stress. High scorers are also likely to have a positive attitude, be optimistic about the future, and demonstrate high levels of professionalism,	34

Table Ten--Technical-Professional Solutions			
	Solution Component	Definition	Items
Selection	35 - 50 Minutes (cont.)		
	Interpersonal Leadership	Measures the candidate's interpersonal characteristics. High scorers are likely to persuade and influence others, gain commitment, and build effective interpersonal relationships. They also have potential to develop skills in the areas of employee relations, coaching, motivating, and leading a team.	41
	Decision Making/Problem Solving	Measures the tendency to efficiently and effectively use numerical and analytical reasoning. This competency is characterized by the ability to solve complex problems, and make reasoned decisions.	10
Optional	Communication	Measures the tendency to efficiently and effectively use verbal reasoning. This competency is characterized by the ability to verbally explain complex information to others.	10

Table Eleven may be used for executive positions:

	Solution Component	Definition	Items
Table Eleven--Executive Solutions			
Screening	20 Minutes		
Required	Executive Potential	Measures potential for success in high-level organizational positions across industry type and functional area. Scores on Executive Potential are derived from candidates' responses to questions regarding work background, accomplishments, and career aspirations.	53
Selection	35 - 50 Minutes		
Required	Business Leadership	Measures the candidate's thinking styles. High scorers are likely to have or learn good planning and organizing skills, be innovative, consider issues from multiple perspectives, and create strategies to build their business.	32
	Leadership Motivation	Measures the candidate's desire for achievement, drive, initiative, energy level, willingness to take charge, and persistence. High scorers are likely to be highly motivated to succeed and to set challenging goals for themselves and others.	35
	Self-Leadership	Measures the candidate's ability to control emotions, act with integrity, take responsibility for actions, and tolerate stress. High scorers are also	34

Table Eleven--Executive Solutions			
	Solution Component	**Definition**	**Items**
		likely to have a positive attitude, be optimistic about the future, and demonstrate high levels of professionalism.	
	Interpersonal Leadership	Measures the candidate's interpersonal characteristics. High scorers are likely to persuade and influence others, gain commitment, and build effective interpersonal relationships. They also have potential to develop skills in the areas of employee relations, coaching, motivating, and leading a team.	41
	Decision Making/Problem Solving	Measures the tendency to efficiently and effectively use numerical and analytical reasoning. This competency is characterized by the ability to solve complex problems, and make reasoned decisions.	10
Optional	Communication	Measures the tendency to efficiently and effectively use verbal reasoning. This competency is characterized by the ability to verbally explain complex information to others.	10

Table Twelve may be used for jobs involving campus recruiting:

Table Twelve--Campus Recruiting Solutions			
	Solution Component	**Definition**	**Items**
Screening	**12 Minutes**		
Required	Supervisory Potential	Measures potential for supervisory success across industry type and functional area. Scores on Supervisory Potential are derived from candidates' responses to questions regarding academic and social background, and aspirations concerning work.	26
	Judgment	Measures potential for making good judgments about how to effectively respond to work situations. Scores on Judgment are derived from candidates' responses to questions regarding situations one would likely encounter as a manager/supervisor.	
	Management Potential	Measures potential for managerial success across industry type and functional area. Scores on Management Potential are derived from candidates' responses to questions regarding academic and social background, and aspirations concerning work.	

Table Twelve--Campus Recruiting Solutions			
	Solution Component	Definition	Items
Selection	20 - 35 - 50 Mins		
Required	Business Leadership	Measures the candidate's thinking styles. High scorers are likely to have or learn good planning and organizing skills, be innovative, consider issues from multiple perspectives, and create strategies to build their business.	32
	Leadership Motivation	Measures the candidate's desire for achievement, drive, initiative, energy level, willingness to take charge, and persistence. High scorers are likely to be highly motivated to succeed and to set challenging goals for themselves and others.	35
	Self-Leadership	Measures the candidate's ability to control emotions, act with integrity, take responsibility for actions, and tolerate stress. High scorers are also likely to have a positive attitude, be optimistic about the future, and demonstrate high levels of professionalism.	34

Table Twelve--Campus Recruiting Solutions			
	Solution Component	Definition	Items
Selection	20 - 35 - 50 Mins (cont.)		
	Interpersonal Leadership	Measures the candidate's interpersonal characteristics. High scorers are likely to persuade and influence others, gain commitment, and build effective interpersonal relationships. They also have potential to develop skills in the areas of employee relations, coaching, motivating, and leading a team.	41
Optional	Decision Making/Problem Solving	Measures the tendency to efficiently and effectively use numerical and analytical reasoning. This competency is characterized by the ability to solve complex problems, and make reasoned decisions.	10
Optional	Communication	Measures the tendency to efficiently and effectively use verbal reasoning. This competency is characterized by the ability to verbally explain complex information to others.	10

Table Thirteen may be used for a selection solution for a job involving communication:

Table Thirteen—Communication Solution			
	Solution Component	**Definition**	**Items**
Selection	**37 Minutes**		
Required	Listening Orientation	Measure of the tendency to listen to and understand others' perspectives, to care for others, to accept and respect the individual differences of people, and to be open both to multiple ideas and to using alternative modes of thinking.	73
	English Language Skills	Measures usage of verb tense and sentence construction. Scores on English Language Skills are derived from candidates responses to grammar questions.	
	Verbal Reasoning/ Critical Thinking	Measures verbal reasoning skills and critical thinking/ reasoning skills. Scores on Verbal Reasoning Ability are derived from candidates' responses to analogies and questions about information provided in brief reading passages.	

Table Fourteen may be used for a selection solution for a job involving financial services jobs referred to series six/seven:

Table Fourteen--Series Six/Seven Success Solution			
	Solution Component	Definition	Items
Selection	36 Minutes		
Required	Problem Solving	Measures the ability to analyze and evaluate information. Scores on Problem Solving are derived from candidates' responses to mathematical and analytical reasoning items, requiring candidates to respond to facts and figures presented in various formats.	20
	Verbal Reasoning/ Critical Thinking	Measures verbal reasoning skills and critical thinking/ reasoning skills. Scores on Verbal Reasoning Ability are derived from candidates' responses to analogies and involves making inferences from information provided in the form of brief passages	

Table Fifteen may be used for a selection solution for a job requiring information technology aptitude:

Table Fifteen--Information Technology Aptitude Solution			
	Solution Component	**Definition**	**Items**
Selection	**18 Minutes**		
Required	Critical Thinking	Measure reasoning and critical thinking skills. Scores on Critical Thinking are derived from candidates' responses to information provided in the form of brief passages.	58
	Problem Solving	Measure the ability to analyze and evaluate information. Scores on Problem Solving are derived from candidates' responses to mathematical and analytical reasoning items, requiring candidates to respond to facts and figures presented in various scenarios.	
	Communication	Measures the ability to efficiently use verbal information. Scores on Communication are derived from candidates' ability to identify synonyms.	
	Spatial Ability	Measure the ability to visually manipulate objects. Scores on Spatial Ability are derived from candidates' ability to correctly identify the number of blocks in progressively difficult figures.	

Although the above disclosure has focused on recruiting applications, the generated data may be used in other human capital applications. Figure 13 illustrates a human capital management life-cycle. Measurement and data 1301 is initially used in the context of recruiting 1302. For recruiting 1302, screening, selection, and interview

5   solutions measure applicants' competencies and predict on-the-job performance and thus contribution to business outcomes.

For compensation 1303, data about potential can be weighed against performance data to ensure that high potential employees who are on difficult assignments where they are structurally constrained from succeeding are not underpaid by pure focus on

10   performance. For example, structural constraints may include business environment, poor staff, unreliable equipment, etc.

For retention 1304, business with jobs that have high turnover use the system to ensure that applicants have qualities that contribute to longer tenure in roles.

For performance management 1305, the system can be used to enhance the validity

15   of employee performance evaluation.

For training and development 1306, a company may test current employees in order to design executive training programs addressing each individual's strengths and weaknesses. Or, for employees that took a test and were hired despite weaknesses, the data can be used to structure appropriate training.

20   For succession 1307, data on employees may be collected in the process of organization mergers to assist planning for retrenchment or change. Also, by measuring competencies and mapping them between roles, it is possible to assess the potential that an individual may have for a role other than the job they are currently holding, such as for a promotion or a transfer to another area.

25   The foregoing description is to be considered as illustrative only. The skilled artisan will recognize many variations and permutations within the spirit of the disclosure.

What is claimed is:

1.   A web-based hiring system employing a computer-implemented stack ranked table means, said system comprising:

announcement means for announcing a job vacancy and inviting a job applicant to visit a website identified by a first uniform resource locator;

first computer means for determining whether said job applicant has previously completed a screening solution;

second computer means for providing a second uniform resource locator to said job applicant if said first computer means determines that said job applicant has not previously completed a screening solution;

screening solution means for screening applicants for a job vacancy, the screening solution means being implemented on a website identified by said second uniform resource locator and eliciting screening answers from said job applicant to a limited set of screening questions, said limited set being selected to test particular competencies predictive of successful performance of the type of job covered by said job vacancy;

stack ranked table means implemented by a computer for ranking said job applicant in order against a plurality of other applicants, said stack ranked table means initially ranking said job applicant and said other applicants in order from first to last as soon as said applicant inputs said screening answers;

selection solution means for selecting advancing applicants from said stack ranked table, said selection solution means eliciting selection answers from said job applicant and said plurality of other applicants responsive to selection questions, said selecting being accomplished by said selection means evaluating said selection answers and said stack ranked table means re-ranking said job applicant and said plurality of other job applicants, said selection questions being selected to test particular competencies predictive of successful performance of the type of job covered by said job vacancy;

interview solution means for providing a structured interview of said advancing applicants, said structured interview comprising interview questions provided via computer to a person conducting said structured interview, said stack ranked table means receiving from said interview solution means interview scores provided by said person, and said stack ranked table means re-ranking said advancing applicants upon receiving said interview scores, said interview questions being selected to test particular

competencies predictive of successful performance of the type of job covered by said job

vacancy;

35   performance evaluation recordation means for recording a performance evaluation

of said job applicant if said job applicant is hired;

          correlation means for correlating said performance evaluation with said screening

answers and said selection answers;

          system adjustment means for adjusting said web-based hiring system in response to

40   said correlating.

Fig. 1

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┌─────────────────────────────┐
│      APPLICANT TESTING      │ ─── 201
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│   PREDICTIVE STACK RANKING  │ ─── 202
└─────────────────────────────┘
```

Fig. 2

Fig. 3

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402 ─┌─────────────────────────────┐◄────┐
     │        TEST DESIGN          │     │
     └─────────────────────────────┘     │
              │                           │
              ▼                           │
404 ─┌─────────────────────────────┐◄──┐ │
     │     TEST ADMINISTRATION     │   │ │
     └─────────────────────────────┘   │ │
              │                         │ │
              ▼                         │ │
406 ─┌─────────────────────────────┐───┘ │
     │   EMPLOYEE PERFORMANCE      │─────┘
     │        EVALUATION           │
     └─────────────────────────────┘
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Fig. 4

JOB VACANCY WITH A REQUIREMENT FOR AN ONLINE SCREENING AND SELECTION SOLUTION   502

| ONLINE APPLICATION VIA COMPANY'S OWN WEBSITE 504 | ON LINE APPLICATION VIA JOB BROWSER 506 | RECRUITMENT FIRM APPLICANT DATABASE 516 | EXECUTIVE SEARCH VIA RECRUITER NETWORK 514 | JOB FAIR 512 | CANDIDATES DIRECT FROM COMPANY GIVEN URL TO APPLY 508 | MEDIA ADVERTISEMENT INC URL FOR JOB |

APPLICANT GIVEN URL FOR ASSESSMENT VIA EMAIL, MAIL, OR IN PERSON

NO

520 HAS APPLICANT COMPLETED THE REQUIRED SCREENING SOLUTION?

NEW SOLUTIONS DESIGNED AND EXITING SOLUTIONS IMPROVED USING DATA FROM DATA WAREHOUSE

YES

524 SCREENING SOLUTION

APPLICANT DETAILS AND SCREENING SCORES

STACKED RANKED TABLE OF APPLICANTS

534

DATA FORWARDED TO DATA WAREHOUSE FOR R&D AND CLIENT REPORTING

536 SHORT-LIST CHOSEN

538 SELECTION SOLUTION

541 APPLICANT DETAILS AND SCORES RETURNED TO STACK RANKED TABLE

APPLICANT FEEDBACK 540

542 INTERVIEW SOLUTION FOR SHORT-LISTED APPLICANTS

544

548

FINAL SELECTION MADE 546

OTHER DECISION DATA STORED IN STACK RANKED TABLE

Fig. 5

550 PERFORMANCE DATA FOR SUCCESSFUL APPLICANT COLLECTED AT A DATE

SUBSTITUTE SHEET (RULE 26)

600

ePredix Solutions - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back · → · Search Favorites · History

Address C:\Documents and Settings\nigel.delton\My Documents\epredix\Demos\June 5, 2001\general\part_2\cspl_s_page1.html

1. What is the highest grade you FINISHED in school?
   a. 11th grade or lower
   b. 12th grade
   c. 1 year of college
   d. 2 or 3 years of college
   e. College graduate or higher

2. What were your grades like during your last two years in school?
   a. Mostly A's
   b. Mostly A's and B's
   c. Mostly B's and C's
   d. Mostly C's and D's
   e. Mostly D's and below

3. On a job, which would you generally prefer?
   a. I work best when my instructions are clear
   b. I work best when there are no interruptions
   c. I work best when I'm in the mood

4. Which kind of employee do you believe is poorest - one who:
   a. Refuses to work a fair share of overtime
   b. Skips work and doesn't call in
   c. Is a few minutes late almost every day
   d. Takes home some small company property
   e. Works much slower than others on the job

5. When you think about what you are going to do in the near future, you:

Done   My Computer

Start   Visio 2000 - [Business ...   Solutions by ePredix ...   Stack rank 6 June.jpg ...   ePredix Solutions ...   11:48 AM

Fig. 6

SUBSTITUTE SHEET (RULE 26)

Fig. 7

800

Time Remaining: [ ]

Customer Contact

Name: Mary Q Public	Today's Date	Account Number: 1225637
Address: 16 E. Pine Avenue	5/8/2001	Telephone: 1-310-345-7878

Date	Memo
01/20/2000 Jan	CO, AB, 82
02/03/2000 Mar	LT, AR, 23
03/17/2000 Mar	CO, LY, PD, 93
01/05/2000 May	CO, AB, LY, 76, 93
05/22/2000 May	LT, AR, 45
06/18/2000 June	CO, PD, 82
07/21/2000 July	CO, AB, CA

802

Memo Codes

LY: late payment dispute	AR : account past due courtesy call
AB : account balance inquiry	23 : unanswered telephone call
LT : send late payment notice	45 : telephone
CA : account closing	78 : customer change of address
CO : customer will make payment in 5 days	82 : sales call
PD : customer will make payment in 5 days	93 : customer requested supervisor

1. What is the total number of requests for account balance?
   a. ○ 0
   b. ○ 1
   c. ○ 2
   d. ○ 3
   e. ○ 4

804

RETAIL CUSTOMER PROMOTIONS INQUIRY

Retailer Discount	Retailer Cash-back Bonus	Today's Date
Starting Date: 06/01/2000	Starting Date: 06/01/2000	5/8/2001

Terms for Retailer Discount		Terms for Retailer Cash-back Bonus	
Length of Program	60 days	Length of program	60 days
Minimum required purchase	200.00	Minimum required purchase	100.00
Retail discount rate	.05%	Retail cash-back rate	.025%

Fig. 8

Interview Guide:

Customer Service Solutions: Call Center Positions - Revenue Focus

	Below Average			Average				Above Average		
(Circle One)	1	2	3	4	5	6	7	8	9	10

1. Sometimes in our relationships with clients, we aren't able to give them everything they ask for. Tell me about a time you had to negotiate a give-and-take relationship with a customer.

Situation: What was the situation? What did the client want that you could not provide?

Behavior: How did the two of you reach an equitable compromise? How did the situation turn out (did you both get what you wanted?)

Outcome: What was the outcome?

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Interview Guide:

Customer Service Solutions: Call Center Positions - Motivation

Below Average			Average				Above Average		
1	2	3	4	5	6	7	8	9	10
Avoids learning opportunities; prefers to stay within the parameters of current position; resists against suggestions by a supervisor to take part in learning opportunities.			Articulates modest goals.				Regularly seeks out opportunities to learn new things; actively pursues learning and self-development opportunities.		
Loses interest in a project easily; cannot or will not stick with the more time-consuming projects.			Puts for the effort necessary to meet most goals.				Maintains momentum and sustains effort on projects, even when they require long hours of work.		
Consistently fails to meet even the most basic quality standards in work; does nothing to achieve or maintain high quality standards.			Performs beyond normal scope when asked.				Consistently goes above and beyond what is expected to ensure the high quality of work; continually identifies and implements ways to improve the quality of work.		
Stops working when confronted with obstacles; is unconcerned with reaching objectives.			Quality of work meets expectations.				Continues to work on a task and tries alternative approaches when confronted with obstacles.		

902
910
904
906
908

Fig. 9

APPLICANT SYSTEM

1. APPLICANT GOES TO COMPANY'S WEBSITE, GOES TO COMPANY'S CAREER SECTION AND SELECTS A JOB

2. APPLICANT READS JOB ADVERTISEMENT THEN CLICKS ON APPLY HERE WHICH IS LOCATED AT THE BOTTOM OF THE AD

3. APPLICANT LOGS ONTO THE SYSTEM A NEW USER.

4. APPLICANT VIEWS TERMS AND CONDITIONS OF USE AND READS THEIR USER RESPONSES

SCREENING SOLUTION (APPLICANTS APPLY FOR A JOB ONLINE)

5. APPLICANT IS DIRECTED TO THE COMPANY'S ONLINE APPLICATION PROCESS. THIS TYPICALLY STARTS WITH AN APPLICATION FORM

7. SCREENING SOLUTION IS AUTOMATICALLY SCORED TO PRODUCE A NUMBER OF SUMMARY SCORES AND A FINAL SCORE THAT DECIDES IF THE APPLICANT IS SUITABLE OR UNSUITABLE

6. ALL APPLICANTS MOVE SEAMLESSLY INTO THE SCORABLE COMPONENT OF THE APPLICATION

6A. IF PASS, APPLICANT RECEIVES A CUSTOMIZED MESSAGE INDICATING THAT THEY HAVE PASSED AND WILL BE CONTACTED BY THE COMPANY.

6B. IF FAIL, APPLICANT RECEIVES A CUSTOMIZED MESSAGE INDICATING THAT THEY HAVE NOT PASSED AND THE NEXT STEPS AS REQUESTED BY THE COMPANY

8. ALL APPLICANTS EXIT OUT OF THE SYSTEM

9. COMPANY HAS OPTION OF REDIRECTING THE COMPANY TO ANY PART OF THE WEBSITE THROUGH THE SYSTEM

Fig. 10

SELECTION SOLUTION
(SUCCESSFUL APPLICANTS
FROM THE SCREENING
SOLUTION ARE INVITED INTO THE
COMPANY'S PREMISES FOR
FURTHER ASSESSMENT)

10. COMPANY REVIEWS SUMMARY REPORT AND INVITES APPLICANTS INTO THEIR PREMISES FOR A MORE IN DEPTH ASSESSMENT.

11. APPLICANT IS INVITED INTO COMPANY'S PREMISES AND LOGS ONTO SELECTION SOLUTION.

12. COMPANY VERIFIES THE IDENTITY OF THE APPLICANT AND AUTHORIZES THEM TO START THE SELECTECTION SOLUTION.

13. APPLICANT STARTS THE SELECTION SOLUTION.

15. STAGE 1 ASSESSMENTS ARE SCORED REALTIME SO THAT APPLICANTS CAN BE PROGRESSED THROUGH THE SOLUTION OR LOGGED OUT.

14. APPLICANT COMPLETES THE FIRST SCORABLE COMPONENTS OF THE SELECTION SOLUTION.

14A. IF PASS, APPLICANT MOVES SEAMLESSLY INTO THE SECOND STAGE OF THE SELECTION SOLUTION.

14.B IF FAIL, APPLICANT RECEIVES A CUSTOMIZED MESSAGE INDICATING THAT THEY HAVE COMPLETED THE APPLICATION PROCESS.

16. APPLICANT COMPLETES THE SECOND COMPONENT OF THE SELECTION SOLUTION.

16A. AF PASS, APPLICANT RECEIVES A CUSTOMIZED MESSAGE THANKING THEM FOR THEIR PARTICIPATION.

16B. IF FAIL, APPLICANT RECEIVES A CUSTOMIZED MESSAGE THANKING THEM FOR THEIR PARTICIPATION.

17. ALL SELECTIONS EXIT OUT OF THE SYSTEM, COMPANY INVITES APPLICANTS INTO AN INTERVIEW IF APPROPRIATE.

18. REALTIME SCORING, COMPANY IS ABLE TO VIEW APPLICANT'S RESULTS AND THEIR RANK ORDER.

Fig. 11

COMPANY OFFICIAL GOES TO THE HOST'S
WEBSITE AND LOGS ON AS A CLIENT

SET UP A
SCREENING SOLUTION

VIEW APPLICANT
RESULTS

SET UP A SELECTION
SOLUTION

SET UP AN INTERVIEW
SOLUTION

2. COMPANY INPUTS THE
DETAILS OF THE JOB FOR
WHICH THEY WISH TO
CREATE A SOLUTION

8. COMPANY SELECTS
THEIR JOB FROM A TABLE OF
ALL JOBS FOR WHICH THEY
CREATED A SOLUTION

11. COMPANY INVITES
SUITABLE APPLICANTS IN
TO COMPLETE A
SELECTION SOLUTION.

COMPANY OFFICIAL
GOES TO THE HOST'S
WEBSITE AND LOGS
ON AS CLIENT.

3. COMPANY SELECTS FROM
A SERIES OF DROP DOWN
MENUS THE CATEGORIES THAT
BEST DESCRIBE THEIR JOB

9. COMPANY VIEWS
SUMMARY REPORT WHICH
CONTAINS APPLICANT DETAILS
SUCH AS COMPLETED
APPLICATION FORM AND THE
DETAILS OF THEIR RESULTS.
REPORTS ARE UPDATED IN
REAL TIME.

12. COMPANY SELECTS
THEIR JOB FROM A
CUSTOMIZED TABLE OF
ALL JOBS FOR WHICH
THEY HAVE
CREATED A SOLUTION.

COMPANY INPUTS THE
DETAILS OF THE JOB FOR
WHICH THEY WISH TO
CREATE A SOLUTION.

4. COMPANY IS PRESENTED
WITH THE OPTION OF SELECTING
DIFFERENT COMPONENTS OF A
SOLUTION (ALL OF WHICH ARE
SUITABLE FOR THE TYPE OF
JOB THY HAVE)

10. COMPANY MAKES
DECISIONS SUCH AS WHETHER
TO BRING APPLICANTS IN FOR A
SELECTION SOLUTION AND/OR
INTERVIEW BASED ON THEIR
RESULTS.

13. COMPANY CLICKS ON
URL LINK WITHIN TABLE AND
APPLICANT LOG ON SCREEN
APPEARS.

COMPANY SELECTS FROM
A SERIES OF DROP DOWN
MENUS THE CATEGORIES
THAT BEST DESCRIBE
THEIR JOB.

5. COMPANY SELECTS
COMPONENTS TO CREATE
A SOLUTION SUITABLE
FOR THEIR JOB.

14. COMPANY
PROGRESSES WITH
AUTHORIZING APPLICANT
TO COMPLETE THE
SELECTION SOLUTION.

COMPANY IS PRESENTED
WITH THE OPTION OF
SELECTING DIFFERENT
COMPONENTS OF A
SOLUTION (ALL OF WHICH
ARE SUITABLE FOR THE
TYPE OF JOB THEY HAVE).

6. COMPANY IS PROVIDED WITH
A URL AND ARE INSTRUCTED TO
ADD THE URL TO THEIR ONLINE
JOB ADVERTISEMENT UNDER
WORDING SUCH AS
"APPLY ONLINE".

COMPANY SELECTS
COMPONENTS TO CREATE
A SOLUTION SUITABLE
FOR THEIR JOB.

COMPANY VIEWS
INTERVIEW GUIDE AND
FILLS OUT APPLICANT
SCORES DURING
STRUCTURED INTERVIEW

7. COMPANY ATTACHES URL
TO ONLINE ADVERTISEMENT
AND WAITS APPLICANTS
TO APPLY.

Fig. 12

COMPANY ENTERS
APPLICANT SCORES IN
STACK RANKED TABLE

Fig. 13